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# The challenges in conserving the heritage based on conservation practice of AA Maramis Building in Jakarta

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***Abstract –*** Preserving the originality or maintaining the performance is not a choice in heritage conservation. Both aspects need to be completed as a whole consideration for a decision in the conservation project. Conservation practice becomes more complex and challenging, followed by the change of time and condition. This article aims to identify the challenges of heritage conservation practice based on the conservation practice of the A. A. Maramis building. This study was unique in that it linked architectural components of form-function-meaning with a conservation aspect of A. A. Maramis Building restoration. Employing a descriptive qualitative approach, this article characterizes the issues and challenges. The data were collected through a long observation from the initiation until the final stage of the conservation project. The results display some issues that can be addressed as learned from the conservation project of A. A. Maramis Building in Jakarta are related to building regulation, material, and worker skill. Building regulations related to seismic safety are prepared for new structures. Building regulation should provide tools and guidelines that could save the old historic building, prolong its life, and protect the safety of the user. A number of old materials are demanding to be replaced. The construction industry at the present time failed to support most conservation projects, notably regarding building materials such as good quality timber for beams and planks. Old skills to handle masonry construction and woodworks should be reintroduced in technical schools to support conservation projects of buildings from the colonial period.

***Keywords:*** *adaptive uses, architecture, building regulation, conservation, masonry structure*

## I. INTRODUCTION

Building heritage conservation is an act of prolonging the existence of historic buildings (Harun, 2011). Luciani and Del Curto (2018) explain conservation as restoring the heritage to its single and original state. In comparison, Mohamad et al. (2015) emphasize conservation as performance maintenance of the building to protract the life expectancy. A conservator needs to focus on these two aspects simultaneously. Both of those aspects are originality and performance. The original state includes the actual shape, authentic material (Bold et al., 2017), and the old construction method. In contrast with originality, the performance of the building considers using the most sustainable

technology is more critical as the replacement for the classic part than using its original material or method (Mohamad et al., 2015). The coexistent of both aspects has created a collision that has become the fundamental challenge in decision-making in heritage conservation.

Conservation practice becomes more complex and challenging, followed by the change of time and condition. As a simple example, some original materials of heritage become rare or even extinct these days. Harun (2011) has stated four challenges associated with the conservation practice: complex planning, shortage of proficient workers, limited and unmatching material, and complicated regulations. Yung and Chang (2011) see the challenges from the public participation side. They argued that enhancing public participation can help boost the decision-making in conservation and simultaneously improve people's knowledge about heritage (Yung & Chan, 2011). As the compilation of both previous findings and others, Azizi et al. (2016) composed 46 issues from literature and grouped them into five aspects of technical, environmental, organizational, financial, and human issues. The previous four issues by Harun are included in the aspect of organizational and technical, while the public participation issue is also included in the organizational aspect. Seeing many conservation issues, this paper wants to learn what issues can be found from A.A. Maramis's building conservation practice.

The A.A. Maramis building is a heritage building in Jakarta, Indonesia, established in 1828 during the Dutch Colonization Era. There are several pieces of literature about this building. Most of the literature is books and website pages, and only one academic research about A.A. Maramis Building by Purnama (2020). By exploring the history and heritage aspects, this research can fill up the gap in A.A. Maramis building literature. The previous research on A.A. Maramis Building by Purnama (2020) focused on the interior and historical aspects of the building. This research uniquely examines the act of conservation of the building as a whole, not just interior but also exterior.

Conservation treatment in the aspects of function and form, based on conservation principles, was used to maintain the cultural importance of the meaning aspect (Suryono et al., 2013). This study was unique in that it linked architectural components of form-function-meaning with a conservation aspect of A. A. Maramis Building restoration. This article aims to identify the challenges or issues of heritage conservation practice based on the conservation practice of the AA Maramis building.

## II. METHODOLOGY

This study uses a qualitative approach to observe the conservation practice of A.A. Maramis Building. Applied research can be defined as any effort aimed at resolving a problem or phenomenon in such a way that it can be applied and the desired end is achieved. The goal of applied research is to obtain recommendations or proposals that will aid in the solution of the AA Maramis Building problem formulation. In this study, the descriptive approach was used as the research method. The study approach used was descriptive research, which aimed to characterize phenomena or relationships between methodical, factual, and correct phenomena. The descriptive analysis method was employed in this study to evaluate the features of the A.A. Maramis Building based on physical and non-physical factors. The data is collected in a variety of ways, depending on the method used.

The A.A. Maramis I Building is located in the Ministry of Finance complex (Lapangan Banteng – Central Jakarta). The scopes of this research are limited to the architecture disciplines and focus on restoration activity, and the conservation plan includes restoration, rehabilitation, and new addition to support new uses of the A.A. Maramis Building. The data were collected through observation and documentation from all conservation stages (see Fig. 1). It begins with historical research about the building's impact on society. Once we know the building worth preserving, stage two begins with documentation and observation of the A.A. Maramis Building. Stage three identifies the defect of the building. Stage four performs a further test of the building material. Stage five prepares the building to be conserved. Finally, stage six is the initiation of the conservation works, and stage seven is the report writing task.

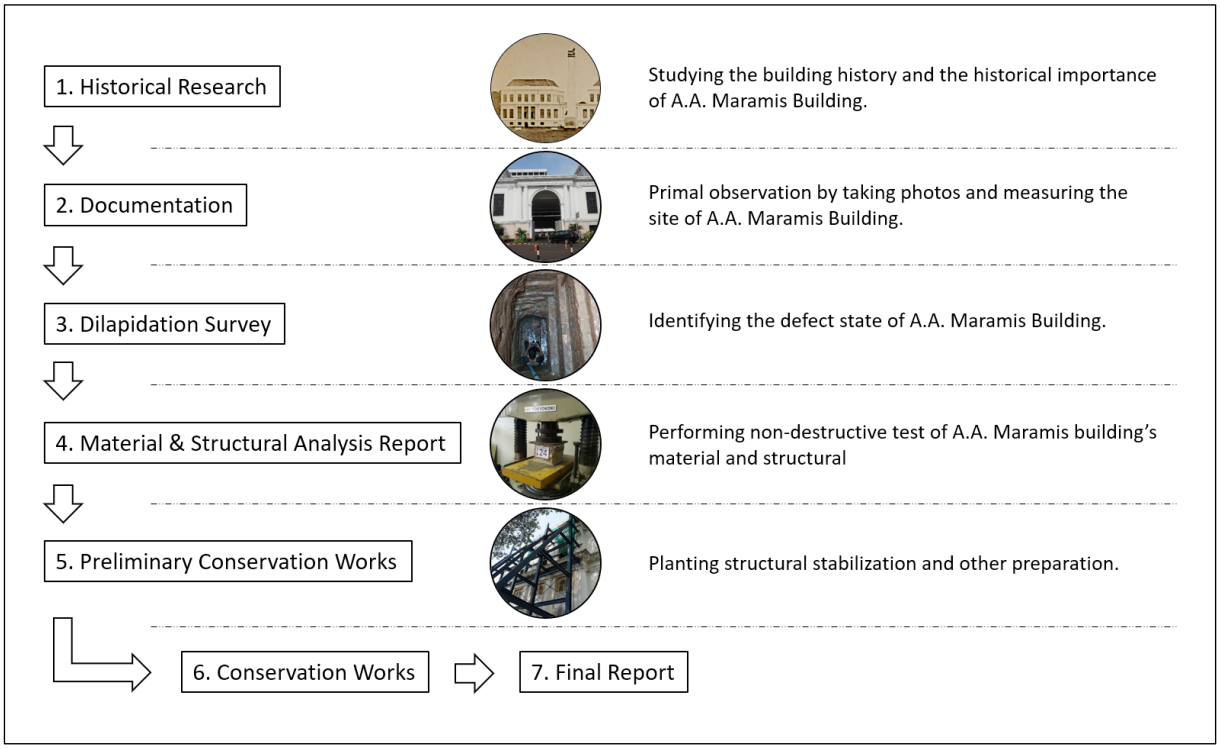


**Fig. 1.** The Conservation Process of A.A. Maramis Building

This research tries to identify the issues happening in A.A. Maramis Building conservation work at all stages (see Fig. 1). But, since there is much previous research about issues and challenges in conservation practice, this research uses all the literature to compare the issues that occur at A.A. Maramis. All these issues are from various countries with different emphases. Some of them are from Malaysia (Azizi et al., 2016; Harun, 2011; Hisham & Hassan, 2015), Hong Kong (Yung & Chan, 2011), and Italy (Borri and Corradi, 2019) (see Table 1). Although all literature provided distinct ideas about issues in conservation, we agree that the issues are grouped in five aspects: the human aspect, technical aspect, financial aspect, environmental aspect, and organizational aspect (see Table 1).

**Table 1.** Issues and Challenges in conservation practice

| Aspect | Source | | | | |
|---|---|---|---|---|---|
| | Azizi et al (2016) | Harun (2011) | Hisham & Hassan (2015) | Yung & Chan (2011) | Borri & Corradi (2019) |
| Human | Communication | lack of responsibility challenge of the conservator | the need for specialist work, | and the lack of knowledge on heritage conservation. | Dialogue between Structural Engineers and Conservators |
| | Law Requirement | lack of skilled workers | lack of technical knowledge, | | |
| | Knowledge | | | | |
| Technical | Financial Support | Conservation plan | incomplete survey information, | | |
| | Shortage of material and labor | choice in material | The different specifications required for conservation works as compared to new building works. | | |
| | | | limited building materials and | | |
| | | | the different sequences of work, | | |
| | | | limited design information, | | |
| Financial | Financial | | insufficient cost information, | | |
| Environmental | Economy pressure | | | what is worthy of conservation; | Excess of Delegation, |

| Aspect | Source | | | | |
|---|---|---|---|---|---|
| | Azizi et al (2016) | Harun (2011) | Hisham & Hassan (2015) | Yung & Chan (2011) | Borri & Corradi (2019) |
| | | | | | Ignorance, and Inaction |
| | building condition | | | | Minimum Intervention |
| | building location | | | | |
| | business opportunity | | | | |
| | third party influence | | | | |
| Organizational | opposing conservation philosophies | conservation guideline for conservation works | lack of standard guidelines in carrying out the works, | the lack of an effective public participation mechanism in the decision-making process; | Issues Produced by Building Codes |
| | confusing laws and guidelines | | | the lack of integrated heritage conservation approach in the decision-making process; | |
| | no standard method of conservation | | | the different and conflicting interests of various stakeholders; | |
| | | | | power disparity; | |
| | | | | propaganda and mobilization of interest groups; | |

## III. HISTORY OF A.A. MARAMIS BUILDING

Since his arrival on the first day of 1808, Herman Willem Daendels, on behalf of the French Empire, had a mission to protect Java island from the potential attack by the British. De Klerck (1938) described the main job of Daendels's appointment was the defence of Java, the reorganization of the military forces and the building of a naval basis in view of the English menace of the colony. According to Heuken (1982) Daendels decided to move the capital to a healthier area in Weltevreden (5 km southeast of the old city of Batavia). Passchier (2016) described the project included the relocation of government buildings, military and recreational facilities, and houses built for the European population. Part of the plan was to erect a new governor's palace at the eastern part of Parade Plaats (later called Waterlooplein, now Lapangan Banteng). To make the cost as minimum as possible, Daendels decided to torn down the old city wall, including the out-of-date castle and some institutional buildings inside the city wall. The Governor General deliberately set about the task of reusing old bricks made available for the construction of his palace in this manner.

As told by Passchier (2016) Lieutenant Colonel Schultze has been credited with preparing the plan for the new governor's palace, accompanied by J.Jongkind as landscape architect. Schultze employed Empire Style (see Fig. 2 and 3) to represent the prevailing architectural styles of the era (1804-1815). The construction began--with the involvement of Chinese contractors--as soon as the plan was approved: one main building in the middle and two identical wings on each side (Fig. 4). Furthermore van Reenen (2005) said that the contractor Tjung See employed 438 bricklayers and carpenters in June 1809, but by November the number reduced to 126 carpenters. The main functions are located on the second and third floor, while services and other supporting facilities are on the first floor. In the original plan, the main entrance was designed at the front side of the main building facing the west. By using the grand staircases (see Fig. 5), people would enter the front terrace on the second floor enclosed by rows of Doric columns.


**Fig. 2.** Daendel's Palace or The White House, circa 1900
Source: Author(s) (2022)

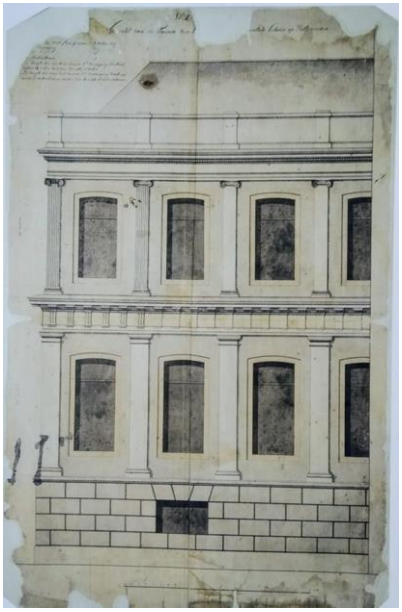

**Fig. 3.** Facade from the original drawing, circa 1809
Source: ANRI (2002)

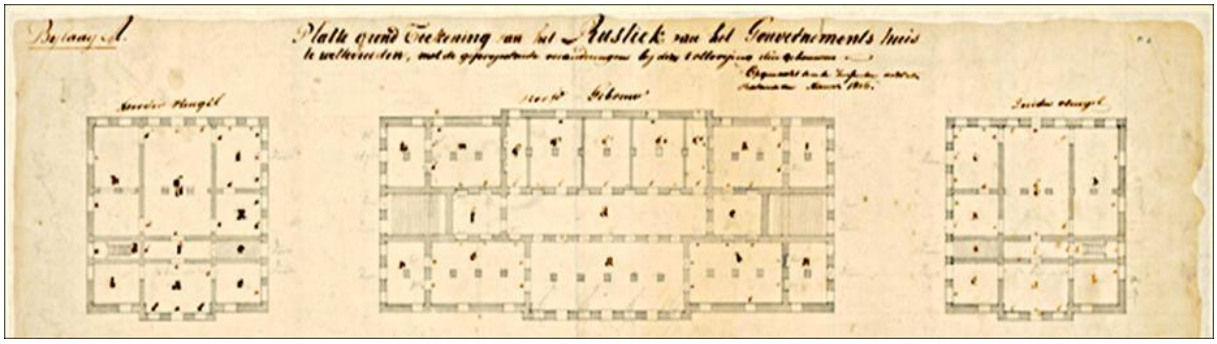

**Fig. 4.** First Floor Plan, circa 1806
Source: ANRI (2002)

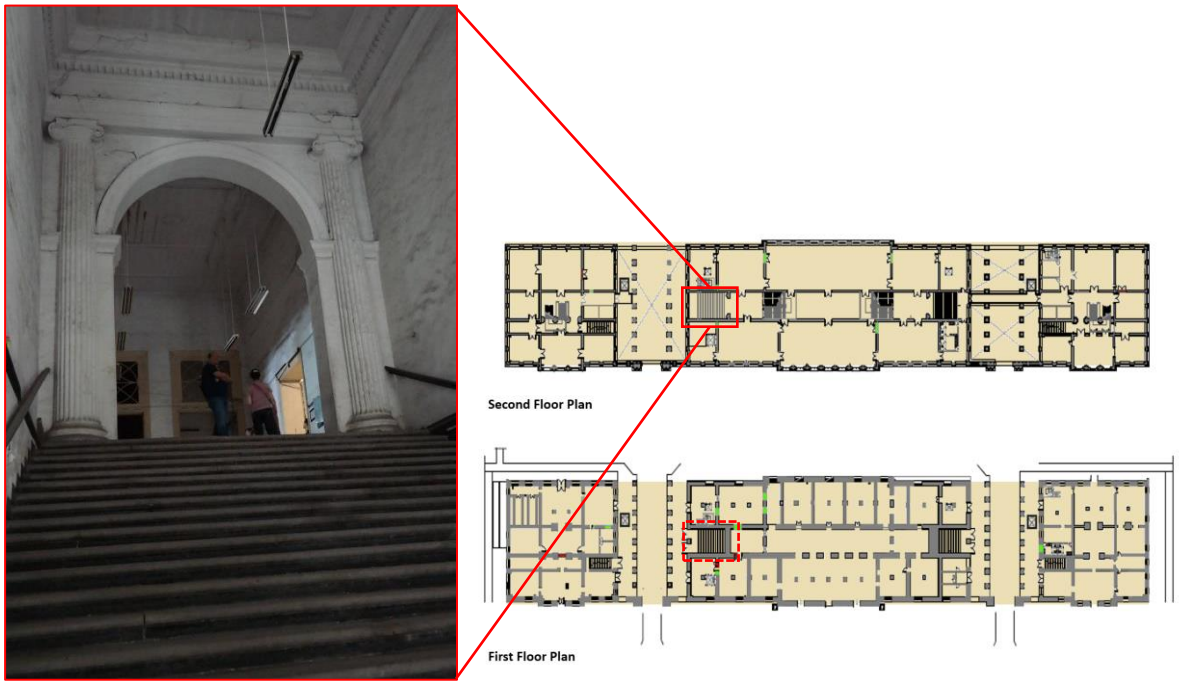


**Fig. 5.** Grand Staircase of Main Building, northern side.
Source: Author(s) (2019)

It is unfortunate for Daendels to have had to leave Java in 1811 without ever seeing the building completed. It was preceded by the next Governor General, who supervised its construction. The successor of Daendels, Governor General J. W. Janssens, as explained by van Reenen (2005), managed to protect the partially roofed main building with bamboo roofing in order to protect the building from the rain. The two wings were just half-completed and abandoned. The British that replaced the French let the construction idle as it was in 1811. Later on, the Dutch continued the construction a little bit late in 1826 with some major changes. J. Tromp, a public work inspector, modified the design to be employed as a government's office, instead of a palace as was initially planned. The main entrances moved to the north and south side of the main building.

The building was finally completed by Commissioner-General Du Bus Ghisignies in January 1828. It's known as "Daendels Palace", or as mentioned by van Reenen (2005), called l'Hotel du Gouvernment or Government House. But later people called the building as "Het Witte Huis" (the White House) or "Het Groote Huis" (The Big House). Since then it has served various government's function, even after Indonesia proclaimed. its independence in 1945. Several additions and changes of spaces occurred according to the ever-changing situations. To suggest a number of examples, these changes include bridges connecting the main building with its two wings and additional internal walls to divide a spacious room into smaller one. In present days, the building was named after the second Minister of Finance of the Republic of Indonesia, A. A. Maramis, under the management of the Ministry of Finance (see Fig. 6).

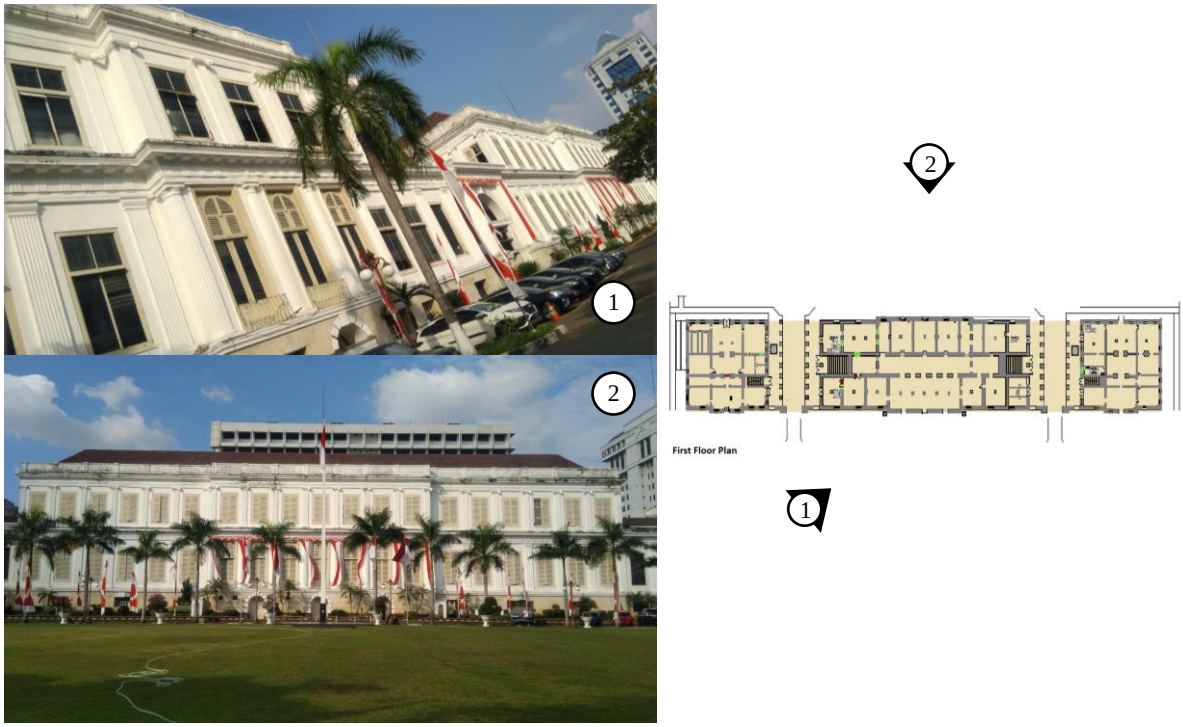


**Fig. 6.** North wing building (L) and the main building (R) with the north gate in between (Above) and Front facade of Main Building, view from west to east (Bottom).
Source: Author(s) (2020)

## IV. CONSERVATION FOR NEW USES

The material cultural heritage relatively can be divided into movable or immovable heritage. Heritage objects can be classified into several groups: buildings (residential houses, industrial buildings, special purpose buildings, etc.); objects of urban heritage (historical parts of the city, old towns, their districts, small towns); sites of historical events, also buildings and related objects that are associated with famous state persons, writers, artists, scientists, history of science and technology; works of fine monumentalism, applied and decorative art (Pavlovskis et al., 2019). Heritage may be used for promoting urban sustainability, thus managing and using heritage buildings creates new jobs and resources for the economy. According to Indonesia Regulation No.11 of 2010 on Cultural Heritage, buildings with such criteria must be protected, maintained, and utilized. UNESCO's recommendations on buildings and cultural heritage environments fundamentally save the past for the future and give a future to the past (Kementerian Keuangan Republik Indonesia, 2012).

The A. A. Maramis Building is considered the biggest masonry building in Indonesia from the 19th century. Groll (2002) explained that the building has two spacious stories resting on a substructure and divided by pilasters, Ionic above, and Doric below. The mid-section is 19 windows wide and the corner pavilions, which are connected to the main block by grand gateways, are both 7 windows wide. Simply stated, the building is three stories high, consisting of one main building in the middle facing west, and two identical wings on each side (north and south). The wing floor plan is a square of 30 m x 30 m, while the main building forms a shape of a rectangle of 76 m x 30 m. A covered porte-cochere on both sides connects the main building with its wings. The first floor to the second floor is a modest 3.5 m high. In contrast, the second floor to the third is a monumental space with 7.3 m high. The reach from the third floor to the attic is approximately 6.3 m high.

Several attempts had been made since 2000 for new uses of the A. A. Maramis Building but failed. Fortunately, the Ministry of Finance finally acquired some precious materials of preparation by conducting seminars, workshops, meetings and planning projects regarding the conservation of the building—such a huge masonry building with approximately 10.000 sqm in area. In 2005, a book titled "The White House of Weltevreden" was published—in cooperation with Dutch Government—and ultimately boosting a new hope for immediate actions. Later in 2012, a survey was conducted to identify damages and existing conditions of the building. Due to aging, weathering, and usage since 1828, the

building was in a bad shape from every aspect—architecture, structure, mechanical and electrical, as well as interior and landscape. The outer wall of the south wing building, for instance, was tilted to the outside and had to be supported by steel structures to prevent it from falling apart. Some floor structures were badly damaged and even collapsed, caused by decay, termites, and improper usage. Suryono (2013) emphasized that conservation measures for heritage buildings should include conservative treatment and reinforcement of vulnerable parts of the building envelope, while all parts have undergone routine maintenance and parts are new and original copies should be painted in slightly different colors. Restorative treatment in the center of the interior spaces, the decorations, and exterior elements according to its original architectural concept can be restored and regular maintenance. In addition, adaptation to the new function of the building can be considered to maintain cultural significance.

In early 2019, a conservation guideline for A. A. Maramis Building was finally published. Based on the guideline, a conservation project was established in late 2019 (Juwana, 2019). After more than 8 months, conservation documents were submitted for tender and construction in 2020.

The adaptive uses had been decided by the Ministry of Finance to prolong the life of A. A. Maramis Building: a library, a museum, office for the Ministry of Finance and other supporting uses. The conservation plan includes restoration, rehabilitation and new addition to support new uses that take into account current building regulation related to fire safety, and for comfort. Some additions worth mention are: a. new restrooms to give comfort, b. elevators to meet access regulation related to people with disability—especially for wheelchair users, c. extra stairs for fire or emergency escape, d. air conditioning system to control indoors temperature and humidity. Suryono (2013) explained that important architectural elements in building conservation must be preserved include building elements (interior spaces, decorations) and exterior spaces (formal aspects), and activities dynamic (functional aspect). Furthermore, formal aspects will be enhanced by symbolic architectural value and functional elements by socio-historical value. On the other hand, the act of conservation has to maintain its architectural integrity as well. According to Murtagh (1993), as defined by W.Brown Morton and Gary Hume of National Park Service in The Secretary of Interior's Standards and Guidelines for Rehabilitating Historic Building, architectural integrity must have some or all of the following attributes: (1) style, (2) workmanship, (3) setting or location, (4) materials, (5), building type or function, and (6) continuity.

## V. CHALLENGES IN CONSERVING A.A MARAMIS

Architects, archaeologists and engineers are facing a challenge to preserve some original fabric of masonry building but at the same time have to deal with new regulations regarding seismic safety imposed by the authority, and also with scarcity of materials—especially timber for wooden beams and planks. Current building regulations are prepared for new structures (steel and reinforced concrete structures), not for load bearing masonry wall with wooden beams and planks. Forster (2010) argued that conservation effort should be based on principles, precise criteria, and minimal (least) intervention (or conservative repair) Materials and processes (as with similar materials), reversibility, documentation (meticulous recording and documenting), and sustainability are all factors to consider.

The load bearing masonry building was supported by a wooden pile and brick foundation (Fig. 7). The lowest part of the bearing wall has a thickness approximately 110 cm, gradually decreasing to 65 cm at the second floor, and 55 cm at the third floor (Fig. 7). The floor was built by a series of wooden beams and planks in the old manners as usually found in old buildings from that period—except that the first floor, which is on the ground level, is mainly covered by natural stones.

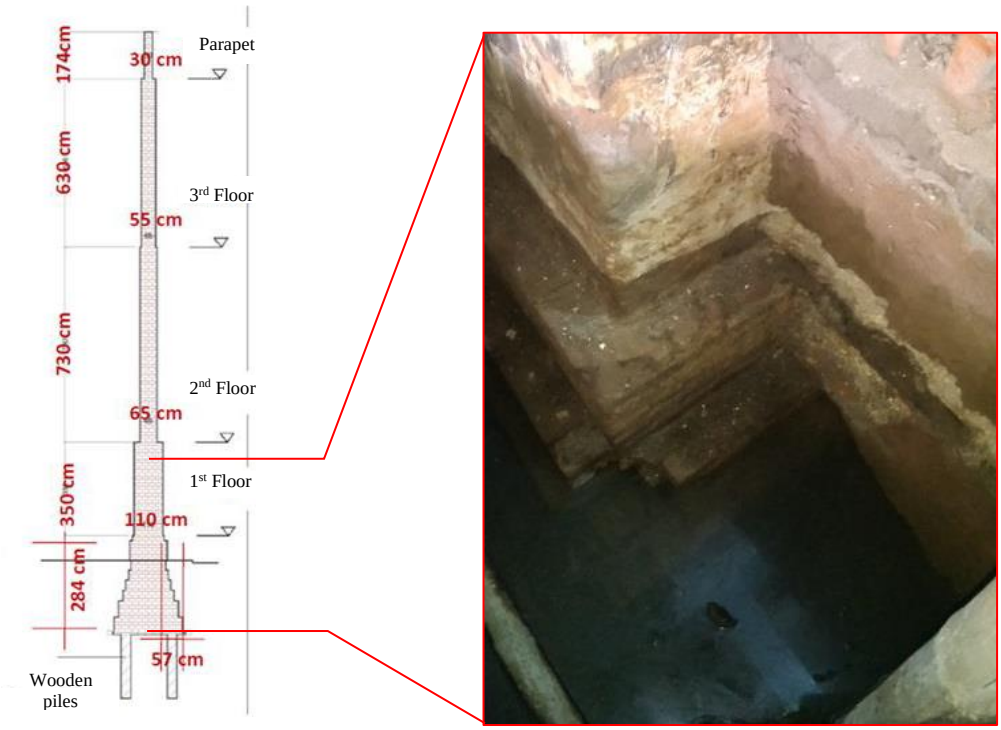


**Fig. 7.** Masonry Wall section (Left) and Brick foundation, construction technology of the past (Right)
Source: Kementerian Keuangan (2020) (Left) and Author(s) (2020) (Right)

As required, samples of bricks had to be tested for its shear strength (see Fig.8). The result was quite remarkable: most of the bricks tested were in a good shape, but when bricks act as a wall it had to be strengthened to some extent. Then, selected walls would be reinforced by carbon fiber reinforced polymer applied on both sides symmetrically—as suggested by the structural engineer (see Fig.8) to fulfill the seismic safety's requirement (see Fig. 9). On the other hand, broken or badly damaged wooden beams and planks are difficult to replace. What is available in the market is smaller in size and lower in quality. To solve the problems, a steel beam was used with regrets.

**Fig. 8.** Sample of bricks prepared for the shear strength test. Wooden planks in bare condition need some repair and maintenance (Left) and Interior of north wing building: the second floor. Some wooden materials need repair, maintenance or replacement (Right).
Source: Author(s) (2020).

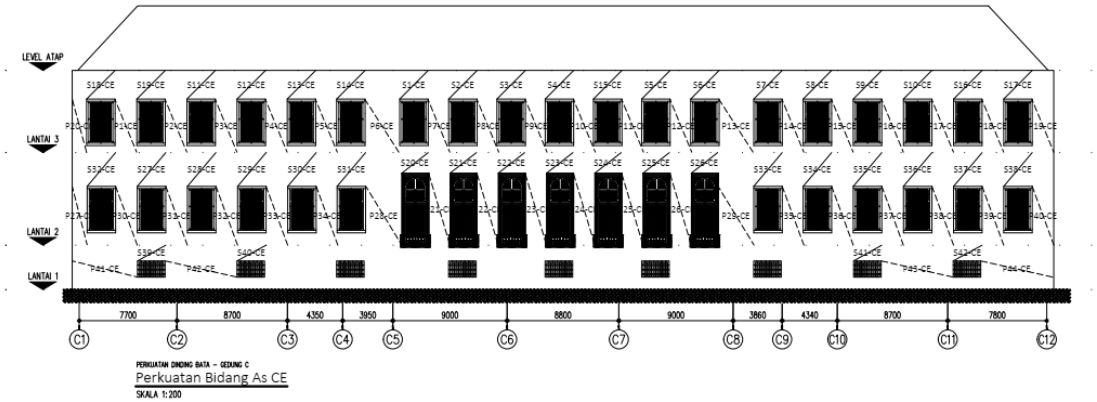


**Fig. 9.** Carbon Fiber Reinforced Polymer applied on selected walls to protect the integrity of the whole building against seismic force.
Source: Kementerian Keuangan (2020)

On the contractor's side, the labour's skill to deal with old masonry and woodwork is hard to find. They are not even familiar with the wooden pile and brick foundation that supports the wall bearing structures of A. A. Maramis Building. With limited experience, the contractor approached the conservation project without much understanding about the nature of masonry building. Consequently, conservation projects for such a huge masonry structure like A. A. Maramis Building will always fail to meet its primary objective: to preserve not just the shape in general, but also the original materials as much as possible.

Some issues that can be addressed as learned from the conservation project of the A. A. Maramis Building in Jakarta are building regulation, unreplaceable material, and the scarcity of old construction knowledge. Building regulations related to seismic safety are prepared for new structures. Existing buildings, especially historic buildings—in this case, from the 19th century—need special treatment for seismic safety. Building regulation should provide tools and the guideline that could save the old historic building and prolong its life as well as protect the safety of the user. Some old materials are hard to replace. Construction industry at the present time failed to support most conservation projects, especially regarding building materials such as good quality timber for beams and planks. Old skills to handle masonry construction and woodworks should be reintroduced in technical schools to support conservation projects of buildings from the colonial period. Compare to the five aspects proposed by Azizi et al (2016), this research found three aspects as the main issues. Those aspects are organizational, human, and technical (see Fig. 10).

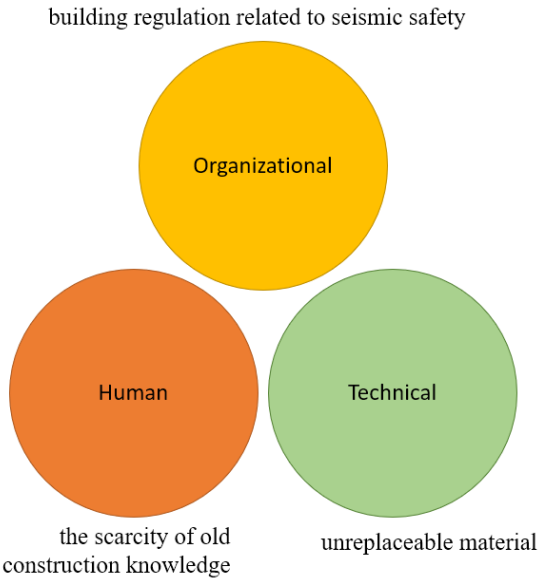


**Fig. 10.** Main Issues in A.A. Maramis Building conservation

## VI. CONCLUSION

The case of conserving A.A. Maramis building makes Architects, archaeologists, and engineers face a challenge to prolong the building's originality and maintain the building's performance. They struggle to preserve some original fabric of masonry buildings. At the same time, they have to deal with new regulations regarding seismic safety imposed by the authority and the scarcity of materials, especially timber for wooden beams and planks. The work becomes more challenging when no workers are skilled in the old construction techniques. In conclusion, the main issues consist of three aspects: human aspect, organizational aspect, and technical aspect.

Conservation measures for heritage buildings should include conservative treatment and reinforcement of vulnerable parts of the building envelope, while all parts have undergone routine maintenance and parts are new and original copies should be painted in slightly different colors. The important architectural elements in building conservation must be preserved building elements (interior spaces, decorations) and exterior spaces (formal aspects), and activities dynamic (functional aspect).

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